

# United States Department of Agriculture

## PRODUCTION AND MARKETING ADMINISTRATION

### SERVICE AND REGULATORY ANNOUNCEMENTS NO. 99<sup>1</sup>

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## OFFICIAL UNITED STATES STANDARDS FOR GRADES OF CARCASS BEEF

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(Title 7, Ch. I, Pt. 53, Sections 53.102–53.106 of the Code of Federal Regulations)

The following is a reprint of the official United States standards for the grades of carcass beef promulgated by the Secretary of Agriculture under the Agricultural Marketing Act of 1946 (60 Stat. 1087; 7 U. S. C. 1621 et seq.) and the items for Market Inspection of Farm Products and Marketing Farm Products recurring in the annual appropriation acts for the Department of Agriculture. The standards are reprinted with amendments effective December 29, 1950.

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### DEVELOPMENT OF THE STANDARDS

The tentative U. S. standards for the Grades of Dressed Beef were formulated in 1916. They provided the basis for uniformly reporting the dressed beef markets according to grades, which work was inaugurated as a national service early in 1917. The grade specifications were improved from time to time as experience gained through their use indicated what changes were necessary. They were published first in mimeographed form in June 1923. After slight changes they were included in Department Bulletin No. 1246 "Market Classes and Grades of Dressed Beef" which was published in August 1924.

Public hearings were held at Portland, Oreg., Chicago, Ill., and New York, N. Y., in 1925 to give producers, slaughterers, wholesale and retail meat dealers, agricultural college workers, and others interested in the marketing of livestock and meat an opportunity to make suggestions for improving the standards. The sentiment registered at those meetings was overwhelmingly in favor of the grades as presented. The few suggestions and criticisms offered were carefully considered in subsequent revisions of the standards.

The tentative standards, although designed primarily for meat market reporting purposes, were put to further practical test in numerous ways. During World War I they were used in the selection of beef for the Army, Navy, and Allies. Later they were included in the specifications of the Emergency Fleet Corporation for the purchase of its beef supplies. Soon thereafter they were incorporated in the specifications of many commercial concerns, including steamship lines, restaurants, hotels, dining-car services, and hospitals.

The revised grade descriptions were promulgated by the Secretary of Agriculture, June 3, 1926, as the Official United States Standards for the Grades of Carcass Beef and published in Service and Regulatory Announcements No. 99 (B. A. E.).

These standards provided the basis for grading when the voluntary beef grading and stamping service was begun in May 1927.

The official standards were amended in July 1939 (Amendment No. 1 to S. R. A. No. 99) so as to provide a single standard for the grading and labeling of steer, heifer, and cow beef according to similar inherent quality characteristics. The amendment also changed certain grade terms for steer, heifer, and cow beef from "Medium," "Common," and "Low Cutter" to "Commercial," "Utility," and "Canner," respectively. A second amendment (Amendment No. 2 to S. R. A. No. 99) issued in November 1941, made similar changes in the grade terms for bull and stag beef and established the following grade terminology for all beef:

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<sup>1</sup>This announcement was issued originally as Service and Regulatory Announcements No. 99 of the Bureau of Agricultural Economics. The work on which it is based is now a part of the Production and Marketing Administration.

Prime,<sup>2</sup> Choice, Good, Commercial, Utility, Cutter, and Canner. A third amendment (Amendment No. 3 to S. R. A. No. 99), in October 1949, eliminated all references to color of fat.

In December 1950, the official standards for grades of steer, heifer, and cow beef were amended (Amendment No. 4 to S. R. A. No. 99) by combining the Prime and Choice grades and designating them as Prime, renaming the Good grade as Choice, and dividing the Commercial grade into two grades by designating the beef produced from young animals included in the top half of the grade as Good while retaining the Commercial grade designation for the remainder of the beef in that grade. Other revisions in the standards for the Prime, Choice, Good, and Commercial grades were made to clarify them and to facilitate their interpretation. Standards for the Utility, Cutter, and Canner grades were not affected. These changes in the standards were a modification of a proposal by the Department to revise the standards in August 1949, and were adopted after careful consideration of comments received in writing over a period of months and those presented orally at a public hearing at Chicago, on June 28, 1950.

### APPLICATION OF STANDARDS

Beef is graded on a composite evaluation of three general grade factors—conformation, finish, and quality. These factors are concerned with the proportions of the various wholesale cuts in the carcass, the proportions of fat, lean, and bone, and the quality of the meat. Carcasses qualifying for any particular grade may vary with respect to their relative development of the three grade factors, and there will be carcasses which qualify for a particular grade, some of whose characteristics may be more nearly typical of another grade. Because it is impractical to describe the nearly limitless numbers of such recognizable combinations of characteristics, the standards for each grade describe only beef which has a relatively similar degree of development of conformation, finish, and quality and which is also generally representative of the midpoint of each grade. A few minimum requirements are included in some of the specifications.

As an aid in the correct interpretation of the standards, the Department uses color photographs of carcasses illustrating combinations of characteristics which qualify the carcasses for the lower limits of each grade.

The grade descriptions are defined primarily in terms of carcass beef. However, they are applicable also to wholesale cuts. It is recognized that some of the wholesale cuts produced from a carcass which may be near the limits of a grade may not be of the same grade as that of the carcass from which they were produced. The correct grade for wholesale cuts shall be determined by an evaluation of the degrees of conformation, finish, and quality of the wholesale cuts and not the carcass from which they are derived.

Beef includes meat from animals that vary widely with respect to maturity. Some of the grades for carcass beef differ with respect to the maximum maturity permitted. In those grades in which the greatest range of maturity is permitted two separate requirements for certain of the grade factors have been specified, depending upon evidences of the maturity attained by the animals from which the beef was produced. Advancing maturity is associated with a general decline in thickness of muscling, increased roughness and irregularity in conformation and finish, and the gradual ossification of bones and cartilages most easily noted in the split chine bones. Within any specified grade the degree of finish and marbling required increases progressively with advancing maturity.

The standards provide for the grading and stamping of beef from steers, heifers, and cows according to its characteristics as beef without sex identification. Such beef placed within each respective grade, therefore, shall possess the characteristics specified for that grade, irrespective of the sex of the animal from which it was derived. Beef produced from bulls and stags shall be graded

<sup>2</sup> The use of the grade specified as "Prime" for beef carcasses and wholesale cuts was suspended for the period September 18, 1942, to December 3, 1946, pursuant to amendment 5, Maximum Price Regulation 169 of the Office of Price Administration. During that period all carcass beef and wholesale cuts that met the specifications of the "Prime" grade were identified with and graded as "Choice."

according to its characteristics as bull beef and as stag beef in accordance with the standards. When graded and identified according to grade, such beef shall be identified also for class as "Bull" beef or "Stag" beef as the case may be. No designated grade of bull beef or of stag beef is comparable in quality with a similarly designated grade of beef derived from steers, heifers, or cows. Neither is the quality in a designated grade of bull beef comparable with a similarly designated quality of stag beef.

### STANDARD GRADES FOR CARCASS BEEF

There are seven grades for beef from steers and heifers, and six grades for beef from cows, bulls, and stags. These are listed in the following schedule of grades:

SCHEDULE—*Standard market classes and grades for dressed beef*

Class	Grade	Class	Grade
Steer, heifer, and cow <sup>1</sup> -----	Prime. Choice. Good. Commercial. Utility. Cutter. Canner.	Bull and stag -----	Choice. Good. Commercial. Utility. Cutter. Canner.

<sup>1</sup> Cow beef is not eligible for Prime grade.

### SPECIFICATIONS FOR OFFICIAL UNITED STATES STANDARDS FOR GRADES OF CARCASS BEEF (STEER, HEIFER, AND COW)

#### PRIME

Prime grade beef carcasses and wholesale cuts are blocky and compact and very thickly fleshed throughout. Loins and ribs are thick and full. The rounds are plump and the plumpness extends well down toward the hocks. The chucks are thick and the necks and shanks short. The fat covering is fairly smooth and uniformly distributed over the exterior surface of the carcass. The interior fat is abundant in the pelvic cavity and over the kidney. The protrusion of fat between the chine bones is liberal and the overflow of fat over the inside of the ribs is abundant and fairly evenly distributed. The intermingling of fat with the lean in evidence between the ribs, called feathering, is extensive. Both the interior and exterior fats are firm, brittle, and somewhat waxy, but the interior fat may be slightly waxy or rough. The cut surface of the rib eye muscle is firm and has a smooth, velvety appearance. It has abundant marbling and the marbling is extensive, especially in the heavier carcasses. The color may range from a pale red to a deep blood red but shall be uniform and bright. The chine bones are usually soft and red, terminating in soft, pearly white cartilages.

Carcasses showing evidence of maximum maturity permitted in the Prime grade have chine bones tinged with white and cartilages on the end of the chine bones are slightly ossified. Carcasses must also be symmetrical and uniform in contour and the rib eye muscle must be fine in texture.

Regardless of the extent to which other grade factors may exceed the minimum requirements for the grade, a carcass must have certain evidences of quality to be eligible for the Prime grade. The cut surface of the muscle must be firm, fine in texture, and bright in color. Slightly abundant marbling must be evident in the rib eye muscle of carcasses with soft, red chine bones terminating in soft pearly white cartilages. Progressively more marbling is required in carcasses with evidences of more advanced maturity. Carcasses which are only moderately compact and blocky with only moderately plump rounds and moderately thick fleshing may meet the minimum requirements for the Prime grade provided they have finish and evidences of quality equivalent to the midpoint of the Prime grade.

Only beef produced from steers and heifers will qualify for the Prime grade.



## CHOICE

Choice grade beef carcasses and wholesale cuts are moderately blocky and compact and moderately thick-fleshed throughout. Loins and ribs are moderately thick and full and the rounds are moderately plump. The chucks are moderately thick and the necks and shanks are moderately short. The fat covering of beef within the grade will vary within moderate limits depending on evidences of the maturity attained by the animal from which it was produced. Carcasses whose chine bones are soft and red and which terminate in soft, pearly white cartilages may have a slightly thin covering of exterior fat and a moderate quantity of interior fat. In such beef there will be a modest protrusion of fat between the chine bones and moderate overflow fat and feathering. Carcasses whose chine bones are tinged with white and which terminate in cartilages in which ossification is plainly evident will usually possess a moderately thick exterior fat covering that extends over nearly the entire surface of the carcass and shall have fairly heavy deposits of interior fat. In such beef there will be a moderate protrusion of fat between the chine bones and moderately abundant overflow fat and feathering. Interior and exterior fats are fairly firm and brittle. Characteristics of the cut surface of the rib eye muscle will vary, depending on evidences of the maturity attained by the animal from which it was produced. In carcasses whose chine bones are soft and red and which terminate in soft, pearly white cartilages, the rib eye has a moderate amount of marbling and is usually slightly soft but fine in texture. In carcasses whose chine bones are tinged with white and which terminate in cartilages in which some ossification is evident, the rib eye has moderately abundant marbling and is usually moderately firm and fine in texture. The color of the muscle usually ranges from a light red to slightly dark-red. It is usually uniform and bright in color but may be slightly two-toned or slightly shady.

Carcasses showing evidences of maximum maturity permitted in the Choice grade have chine bones which are tinged with white and cartilages on the end of the chine bones which are partially ossified. However, the carcasses must also be at least moderately symmetrical and uniform in contour and the rib eye muscle must be fine in texture.

Regardless of the extent to which other grade factors may exceed the minimum requirements for the grade, carcasses whose flesh is moderately soft and slightly watery are not eligible for the Choice grade. The minimum marbling permitted will vary from a small amount in very red-boned, light-weight carcasses to a moderate amount in carcasses approaching the maximum maturity permitted. Carcasses which are slightly compact and blocky and with slightly plump rounds and slightly thick fleshing may meet the minimum requirements for the grade provided they have finish and evidences of quality equivalent to the midpoint of the Choice grade.

Beef produced from steers, heifers, and young cows may qualify for the Choice grade.

## GOOD

Good grade beef carcasses and wholesale cuts are slightly compact and blocky in conformation and the fleshing tends to be slightly thick throughout. Loins and ribs are slightly full and the rounds are only slightly plump. Chucks are slightly thick and full and the neck and fore shanks tend to be slightly long and thin. The fat covering of beef within the grade will vary within moderate limits, depending on the evidences of maturity of the cattle from which it was produced. Carcasses whose chine bones are soft and red and which terminate in soft, pearly white cartilages have a thin exterior fat covering over loins and ribs and over portions of the rounds and chucks. In such beef there will be only a slight protrusion of fat between the chine bones, only a small overflow of fat over the inside of the ribs, and only a small quantity of feathering between the ribs. Carcasses whose chine bones are tinged with white and which terminate in cartilages in which some ossification is evident will usually possess a slightly thick exterior fat covering which extends over most of the rounds and chucks. They will have slight protrusions of fat between the chine bones and slightly abundant overflow fat and feathering. The fat may be somewhat soft or slightly oily. Characteristics of the cut surface of the rib eye muscle will vary depending on evidences of maturity attained by the animal from which it was produced. In carcasses whose chine bones are soft and red and which terminate in soft,

pearly-white cartilages the rib eye has a slight amount of marbling and is usually moderately soft but fine in texture. Carcasses whose chine bones are tinged with white and which terminate in cartilages in which some ossification is evident will have a modest amount of marbling and the muscle is usually slightly soft but moderately fine in texture. The muscle will usually vary from a light red to a slightly dark red in color but may be slightly two-toned or slightly shady.

Carcasses showing evidence of maximum maturity permitted in the Good grade may have chine bones tinged with white and the cartilages on the end of the chine bones may be moderately ossified. Carcasses must also be at least moderately symmetrical and uniform in contour and the rib eye muscle must be at least moderately fine in texture.

Red-boned, light-weight carcasses which have traces of marbling may meet the minimum requirements for Good provided they have conformation equivalent to at least the midpoint of the grade. However, carcasses which show similar evidences of maturity but which are slightly rangy and angular are required to show a slight amount of marbling. Carcasses near the maximum limit for maturity with conformation equivalent to at least the midpoint of this grade may qualify for Good with a small amount of marbling whereas carcasses which show similar evidences of maturity and which are slightly rangy and angular are required to have a modest amount of marbling.

#### COMMERCIAL

Beef qualifying for the Commercial grade is quite variable in conformation, finish, and quality and in the evidences of maturity attained by the animal from which it was produced. Young, red-boned carcasses are rangy, angular, and slightly thin-fleshed throughout. Loins and ribs tend to be flat and are slightly thin-fleshed. The rounds are moderately flat and tapering. Chucks are slightly flat and thinly fleshed. Such beef will have only a thin covering of external fat over the loins and ribs, practically no protrusion of fat between the chine bones, and very scanty quantities of overflow fat and feathering. The cut surface of the rib eye muscle of such beef is somewhat soft and watery but fine in texture and will have little, if any, marbling. The fat is moderately soft or oily.

Carcasses that have hard, white chine bones are slightly thick-fleshed but rather rough and irregular in contour. Rounds are slightly flat and tapering. Loins are moderately wide but slightly sunken and the hips are rather prominent. Ribs tend to be slightly thick and full. Chucks are slightly thin and plates and briskets are wide and "spready." The neck and shanks are slightly long and thin. Such beef will have a moderately thick exterior fat covering, a moderate protrusion of fat between the chine bones, and moderately abundant overflow fat and feathering. The external fat covering of such beef will be considerably thicker over the loins and ribs than over the rounds and chucks and will frequently be patchy or wasty. The fat is usually firm. The cut surface of the rib eye muscle is firm but coarse in texture and the marbling is rather abundant but is also rather coarse and prominent. The lean will usually vary from slightly dark red to dark red in color but may be two-toned or shady.

Young, red-boned, light-weight carcasses with conformation equivalent to the midpoint of the grade as described above may be devoid of marbling and qualify for the commercial grade. However, regardless of the development of other grade factors, older carcasses that have hard, white chine bones must have at least a moderate amount of marbling in the rib eye muscle to qualify for the grade. Carcasses from mature animals with conformation and evidences of quality which only slightly exceed the minimum requirements of the grade are not eligible for the Commercial grade if they are excessively patchy or uneven in distribution of external fat.

#### UTILITY

Utility grade beef carcasses and wholesale cuts may be decidedly rangy, angular, and irregular in conformation. The fleshing is usually thin. The loins and ribs are flat and thinly fleshed. The rounds are long, flat, and tapering. The chucks are flat and thinly fleshed. The neck and shanks are long and tapering. The hip and shoulder joints are prominent. The degree of fat covering varies from very thin in beef produced from young steers and heifers to a slightly thick covering that may be somewhat uneven in beef produced from cattle that are more or less advanced in age. The quantity of interior fat varies from very little in beef that is produced from young and immature steers and heifers to a moderate quantity in that produced from mature cattle. The fat is usually soft.

The cut surface of the lean muscle is usually soft and watery in the beef produced from younger cattle but in that produced from more mature cattle it is usually fairly firm but coarse. The beef in this grade will show practically no marbling except in that produced from aged cattle, which may show a little marbling in the thicker cuts. The color may be two-toned or shady and usually ranges from a light red to a very dark red. The bone is usually hard and white.

The Utility grade of beef may be produced from steers, heifers, or cows.

#### **CUTTER**

Cutter grade beef carcasses and wholesale cuts may be very rangy, angular, and irregular in conformation and very thinly fleshed throughout. The loins and ribs are very flat, thin, and shallow. The rounds are very long, flat, and tapering. The chucks are very flat, thin, and shallow. The neck and shanks are very long and tapering. The hip and shoulder joints are very prominent. The degree of exterior fat covering may vary from a very thin covering that is confined almost entirely to the ribs and loins in the beef produced from younger cattle to a thin, more extensive covering in the beef produced from mature cattle. The interior fat is confined largely to the pelvic cavity and the kidney and may vary from a very small quantity, if any, in these parts in beef produced from younger cattle to a limited quantity in that produced from mature cattle. The cut surface of the lean muscle shows no marbling, is coarse, and is usually soft and watery. The color may be two-toned or shady and usually ranges from a slightly dark red to a very dark red. The bone is usually hard and white.

The Cutter grade of beef may be produced from steers, heifers, and cows. That produced from cows constitutes a relatively large percentage of the beef eligible for this grade.

#### **CANNER**

Canner grade beef carcasses and wholesale cuts shall be extremely rangy, angular, and irregular in conformation and extremely thinly fleshed throughout. All cuts are extremely thinly fleshed. Loins and ribs are extremely thin, flat, and shallow. The rounds are very long, flat, and tapering, and the chucks are extremely thin, flat, and shallow. The neck and shanks are extremely long and the hips and shoulder joints are extremely tapering. Beef of this grade is practically devoid of both interior and exterior fat. The outside surface usually has a very dark appearance. The cut surface of the lean muscle is usually coarse and is soft and watery in appearance. It shows no marbling. The color may be two-toned or shady and usually ranges from a moderately dark red to an extremely dark red or brownish black. The bones are nearly always hard and white.

A very large percentage of the beef of the canner grade is produced from mature cows that are somewhat advanced in age.

### **GRADES OF BULL BEEF CARCASSES**

There are six grades of bull carcasses: Choice, Good, Commercial, Utility, Cutter, and Canner.

#### **CHOICE**

Choice grade bull beef carcasses have excellent quality, finish, and conformation for the class. Rounds, chucks, and neck are thick and are very heavily muscled. Loins and ribs are broad but tend to shallowness and are relatively small in proportion to the rest of the carcass. The exterior surface is well covered with fat which, although rough, is not gobby or excessively deep at any point. Interior fats are plentiful but are somewhat lacking in firmness and brittleness. Usually such carcasses are derived from young, well-fed bulls, although sometimes carcasses of older bulls meet the requirements of this grade. The flesh generally is of a medium dark red color, firm but comparatively dry.

#### **GOOD**

Good grade bull beef carcasses have good quality, finish, and conformation for the class. Rounds, chucks, and neck are thick and heavily muscled. Loins and ribs are relatively small in proportion to the rest of the carcass and are somewhat flat. The general outline is somewhat rough and irregular. Except for the shanks, neck, lower rounds, and shoulders, exterior surfaces generally



are covered with a rough but relatively thin layer of fat. Interior fats are in moderate supply. All fats are somewhat soft and may be slightly oily. Flesh generally is medium dark red in color, moderately firm, and dry.

#### COMMERCIAL

Commercial grade bull beef carcasses possess average quality, finish, and conformation for the class. Rounds, chucks, and neck are thick and full. Loins are relatively thin and flat or sunken. Ribs are moderately thin. Exterior fats are scant and unevenly distributed and generally appear only in spots over the back and rump. Interior fats are likewise scant, with small quantities in the crotch and around the kidneys. The flesh is moderately firm, but usually very dry. Its color varies from dark red to light brown.

#### UTILITY

Utility grade bull beef carcasses, although fairly well-developed in the rounds and chucks, are deficient in these respects as compared with the higher grades. Such a carcass generally is rough in conformation. Loins are very thin or sunken and ribs are flat and thin. Exterior fats generally are lacking, although small quantities may be found on the back and rump. As a rule, interior fats are absent, although slight traces may be found around the kidneys. The flesh is dry and very dark.

#### CUTTER

Cutter grade bull beef carcasses have poor quality and conformation with practically no visible finish. The general outlines are very uneven. Loins and ribs are very flat and thin. Hip and shoulder bones and ribs are very prominent. Generally there are no exterior or interior fats. Flesh, though relatively dry, is inclined to be soft. Its color is dark red to light brown.

#### CANNER

Canner grade bull beef carcasses have extremely poor quality and conformation. Visible finish is generally absent. A carcass of this grade is extremely thin in all parts. Rounds and chucks are thin; loins and ribs are very thin and flat or sunken. There are no exterior or interior fats. Flesh is soft and dark.

### GRADES OF STAG BEEF CARCASSES

There are six grades of stag beef carcasses: Choice, Good, Commercial, Utility, Cutter, and Canner.

#### CHOICE

Choice grade stag beef carcasses have excellent quality, finish, and conformation for the class. Rounds are thick, full, and bulging. Loins and ribs are moderately thick, and chucks are thick and heavily fleshed. Necks are moderately short and thick. The exterior fat covering of the carcass, although slightly rough, generally extends well over the carcass. Interior fats are plentiful in the crotch and on the breast, and the kidneys, as a rule, are well-covered. Flesh is firm and fine-grained for the class and shows some intermixture of fat along the muscle seams. Its color varies from medium to dark red.

#### GOOD

Good grade stag beef carcasses have good quality, finish, and conformation for the class. Rounds are moderately thick and full; loins and ribs are fairly well-proportioned and have moderate depth of flesh. Chucks are thick and necks are moderately thick and short. Except on shanks, neck, lower rounds, and shoulders, a carcass of this grade is fairly well-covered with a thin layer of fat. Interior fats generally are in moderate supply but may be slightly deficient. The flesh is firm, moderately fine-grained, and varies from medium to dark red in color.

#### COMMERCIAL

Commercial grade stag beef carcasses have fair quality, finish, and conformation. Rounds, although somewhat full and thick, are inclined to be tapering. Loins are flat and ribs are somewhat thin. Chucks are broad and relatively



thin. Exterior fats are unevenly distributed and generally appear as a thin layer over the back and in thin patches on the rump and shoulders. Interior fats are somewhat scant and kidneys are generally only partially covered. The flesh is usually slightly soft and moist. Its color varies from medium to dark red.

#### UTILITY

Utility grade stag beef carcasses have poor quality, finish, and conformation. Rounds are thin and tapering. Loins are thin, flat, or slightly sunken. Ribs are thin and chucks are broad and thin. Both exterior and interior fats are scant. Thin patches of fat are usually found along the back and on the shoulders. Small quantities usually are found in the crotch and around the kidneys. Flesh is soft, moist, and dark-colored.

#### CUTTER

Cutter grade stag beef carcasses are decidedly deficient in quality, finish, and conformation. Rounds are thin, long, and tapering. Loins are very flat or sunken, and ribs are flat and very thin. Chucks and plates are broad and thin. All bones are prominent because of deficient flesh and fat covering. Except for very small patches along the back and around the kidneys, visible fats are absent. The flesh is soft, watery, and dark-colored. This grade is seldom found on the markets.

#### CANNER

Canner grade stag beef carcasses are extremely deficient in quality, finish, and conformation. All bones are very prominent. Rounds are extremely thin and sharply tapering. Loins are also extremely thin and dished or sunken. Ribs, chucks, and plates are very thin. No visible exterior or interior fats are present. The flesh is dark, soft, and watery. This grade is rarely found on the markets.

